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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 34

Application Number: 09/486,719
Filing Date: August 02, 2000
Appellant(s): BOIRE ET AL.

Harris A. Pitlick
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 8/21/2003.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is incorrect. In view of the arguments presented in the appeal brief the examiner has withdrawn the 35 U.S.C. 103(a) rejections of claim 19 under Hashimoto in view Leenders in view of Byker or Demiryont and the examiner has withdrawn all 35 U.S.C. 103(a) rejections of claim 20. A correct statement of the status of the claims is as follows:

Claims 16, 17, 19, 21-34 and 36-38 stand rejected and are appealed. Claims 18, 20 and 35, the remaining claims in the application, are allowed.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is incorrect. In view of the examiner withdrawing the 35 U.S.C. 103(a) rejections of claim 19 under Hashimoto in view Leenders in

view of Byker or Demiryont and all 35 U.S.C. 103(a) rejections of claim 20, the issues are as follows:

(1) Whether Claims 16-17, 19, 21-24, 30-34, 36-38 are unpatentable under 35 U.S.C. 103(a) over U.S. 5,777,779 (Hashimoto et al) in view of U.S. 6,366,013 (Leenders et al), and in view of either one of U.S. 6,379,788 (Choi et al), or U.S. 5,780,160 (Allemand et al); and

(2) Whether Claims 16-17, 21-24, 30-34, 36-38 are unpatentable under 35 U.S.C. 103(a) over U.S. 5,777,779 (Hashimoto et al) in view of U.S. 6,366,013 (Leenders et al), and in view of either one of U.S. 6,040,939 (Demiryont et al), or U.S. 5,805,330 (Byker et al); and

(3) Whether Claims 25-26 are unpatentable under 35 U.S.C. 103(a) over the above combination of prior art in (1), and further in view of U.S. 5,800,918 (Chartier et al); and

(4) Whether Claims 25-26 are unpatentable under 35 U.S.C. 103(a) over the above combination of prior art in (2), and further in view of U.S. 5,800,918 (Chartier et al); and

(5) Whether Claims 27-29 are unpatentable under 35 U.S.C. 103(a) over the above combination of prior art in (1), and further in view of U.S. 6,362,121 (Chopin et al); and

(6) Whether Claims 27-29 are unpatentable under 35 U.S.C. 103(a) over the above combination of prior art in (2), and further in view of U.S. 6,362,121 (Chopin et al).

(7) Grouping of Claims

The appellant's statement of the issues in the brief is incorrect. The changes are as follows: In view of the examiner withdrawing all 35 U.S.C. 103(a) rejections of claim 20, Claims 19, 23 and 24 each stand or fall separately from Claim 16.

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is incorrect. In view of the examiner withdrawing all 35 U.S.C. 103(a) rejections of claim 20, claim 20 is allowed and no longer appealed.

(9) Prior Art of Record

5,777,779	Hashimoto	7-1998
6,366,013	Leenders	4-2002
6,040,939	Demiryont	3-2000
5,800,918	Chartier	9-1998
6,362,121	Chopin	3-2002
6,379,788	Choi	4-2002
5,780,160	Allemand	7-1998
5,805,330	Byker	9-1998

(10) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 16-17, 21-24, 30-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,777,779 to Hashimoto et al. (hereinafter referred to as Hashimoto) in view of US Patent No. 6,366,013 to Leenders et al. (hereinafter referred to as Leenders) and in view of 6,040,939 to Demiryont et al. (hereinafter referred to as Demiryont).

Regarding claims 16-17, 21-24, 30-34 and 36-38, Hashimoto discloses an all-solid electrochromic device colored or colorless, corresponding to an applied electrical field (column 1, lines 5-18). Hashimoto discloses that an anti-reflection coating is provided on the surface of the electrochromic device (column 3, lines 1-7). Hashimoto discloses the use of an anti-reflection film composed of a plurality of different kinds of layers on the surface of an electrochromic device (column 3, lines 1-7), but does not mention a specific structure. Leenders discloses that antireflection coatings comprising a stack of alternatively high and low refractive indices (column 7, lines 38-60) are suitable for use in electrochromic devices (column 10, lines 60-64). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the antireflection coatings of Leenders, in the electrochromic device of Hashimoto, because the antireflection coatings are suitable for electrochromic devices.

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Demiryont discloses the use of a color control layer between the glass substrate and the antireflection coating of an electrochromic device (column 6, lines 15-22) to achieve both enhanced uniformity and the desired hue or color (column 7, lines 36-52 and column 8, line 15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color control layer in the electrochromic device of

Hashimoto to give the device a desired color, such as neutral, because a color control layer allows for enhanced uniformity and the desired hue or color.

Regarding claims 17 and 30, Leenders discloses that that a suitable antireflection coating is one comprising ITO (column 7, lines 46-67 and column 8, lines 1-10).

Regarding claims 21-22, Demiryont discloses that it would be within the ability of one skilled in the art to select a suitable material for the color control layer to achieve both enhanced uniformity and desired hue or color of the coated article (column 7, lines 40-50). Unless a showing of unexpected results can be demonstrated, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the color control layer from any suitable single or multiple layer film, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. ***In re Leshin*, 125 USPQ 416.**

Regarding claims 23-24, Hashimoto discloses a first conductive layer that may comprise hydrated tantalum oxide or silicon oxide and a second conductive layer that may comprise tantalum oxide or silicon oxide (column 4, lines 1-8). Hashimoto discloses that the substrate may be glass or plastic (paragraph bridging columns 2 and 3).

Regarding claims 31-34, Hashimoto discloses that the electrically controllable system is a superposition of functional layers placed between two carrier substances of glass or plastic (column 2, lines 51-67 and column 6, lines 18-36) and discloses a protective resin film on the electrically controllable system (column 6, lines 19-30).

Regarding claim 38, Hashimoto discloses the use of an electrochromic system (column 1, lines 7-9), but does not mention the use of an electrically controllable system in the form of a

liquid-crystal system. It would have been obvious to substitute a liquid-crystal system for the electrochromic system of Hashimoto, because both systems are functionally equivalent as electrically controllable systems having variable optical properties.

3. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Demiryont as applied to claims 16-17, 21-24, 30-34 and 36-38 above, and further in view of US Patent No. 5,800,918 to Chartier.

Hashimoto does not mention the use of a coating with hydrophobic properties. Chartier discloses the use of a hydrophobic-oleophobic coating, on a glass substrate, to give the glass substrate a non-wetting property (column 1, lines 48-62). The hydrophobic-oleophobic coating comprises at least one hydrolysable fluorinated alkylsilane (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coating disclosed by Chartier, on the glazing of Hashimoto, because the coating gives the glazing a non-wetting surface property desirable in some electrochromic devices.

4. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Demiryont as applied to claims 16-17, 21-24, 30-34 and 36-38 above, and further in view of US Patent No. 6,632,121 to Chopin.

Hashimoto does not mention the use of a coating with photocatalytic properties, but Chopin discloses a substrate coating with photocatalytic properties comprising titanium dioxide at least partially crystallized in the anatase form (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the photocatalytic

coating of Chopin, to at least one of the external faces of Hashimoto glazing, because the coating would give the glazing anti-fouling properties desirable in some electrochromic devices.

5. Claims 16-17, 19, 21-24, 30-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of 6,379,788 to Choi et al. (hereinafter referred to as Choi).

Regarding claims 16-17, 19, 21-24, 30-34 and 36-38, Hashimoto discloses an all-solid electrochromic device colored or colorless, corresponding to an applied electrical field (column 1, lines 5-18). Hashimoto discloses that an anti-reflection coating is provided on the surface of the electrochromic device (column 3, lines 1-7). Hashimoto discloses the use of an anti-reflection film composed of a plurality of different kinds of layers on the surface of an electrochromic device (column 3, lines 1-7), but does not mention a specific structure. Leenders discloses that antireflection coatings comprising a stack of alternatively high and low refractive indices (column 7, lines 38-60) are suitable for use in electrochromic devices (column 10, lines 60-64). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the antireflection coatings of Leenders, in the electrochromic device of Hashimoto, because the antireflection coatings are suitable for electrochromic devices.

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Choi discloses an antireflection film comprising a colored layer serving to provide the desired tint (column 8, lines 16-23) suitable for image display devices (column 7, lines 54-59). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color layer, as disclosed by Choi, with the antireflection film of

Hashimoto, because a color layer allows for a display device to be desirably tinted, such as a neutral color.

Regarding claims 17 and 30, Leenders discloses that that a suitable antireflection coating is one comprising ITO (column 7, lines 46-67 and column 8, lines 1-10).

Regarding claims 21-22, absent a showing of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the color control layer from any suitable material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. ***In re Leshin*, 125 USPQ 416.**

Regarding claims 23-24, Hashimoto discloses a first conductive layer that may comprise hydrated tantalum oxide or silicon oxide and a second conductive layer that may comprise tantalum oxide or silicon oxide (column 4, lines 1-8). Hashimoto discloses that the substrate may be glass or plastic (paragraph bridging columns 2 and 3).

Regarding claims 31-34, Hashimoto discloses that the electrically controllable system is a superposition of functional layers placed between two carrier substances of glass or plastic (column 2, lines 51-67 and column 6, lines 18-36) and discloses a protective resin film on the electrically controllable system (column 6, lines 19-30).

Regarding claim 38, Hashimoto discloses the use of an electrochromic system (column 1, lines 7-9), but does not mention the use of an electrically controllable system in the form of a liquid-crystal system. It would have been obvious to substitute a liquid-crystal system for the electrochromic system of Hashimoto, because both systems are functionally equivalent as electrically controllable systems having variable optical properties.

6. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Choi as applied to claims 16-17, 19, 21-24, 30-34 and 36-38 above, and further in view of Chartier.

Hashimoto does not mention the use of a coating with hydrophobic properties. Chartier discloses the use of a hydrophobic-oleophobic coating, on a glass substrate, to give the glass substrate a non-wetting property (column 1, lines 48-62). The hydrophobic-oleophobic coating comprises at least one hydrolysable fluorinated alkylsilane (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coating disclosed by Chartier, on the glazing of Hashimoto, because the coating gives the glazing a non-wetting surface property desirable in some electrochromic devices.

7. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Choi as applied to claims 16-17, 19, 21-24, 30-34 and 36-38 above, and further in view of Chopin.

Hashimoto does not mention the use of a coating with photocatalytic properties, but Chopin discloses a substrate coating with photocatalytic properties comprising titanium dioxide at least partially crystallized in the anatase form (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the photocatalytic coating of Chopin, to at least one of the external faces of Hashimoto glazing, because the coating would give the glazing anti-fouling properties desirable in some electrochromic devices.

8. Claims 16-17, 19, 21-24, 30-34 and 36-38are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of 5,780,160 to Allemand et al. (hereinafter referred to as Allemand).

Regarding claims 16-17, 19, 21-24, 30-34 and 36-38, Hashimoto discloses an all-solid electrochromic device colored or colorless, corresponding to an applied electrical field (column 1, lines 5-18). Hashimoto discloses that an anti-reflection coating is provided on the surface of the electrochromic device (column 3, lines 1-7). Hashimoto discloses the use of an anti-reflection film composed of a plurality of different kinds of layers on the surface of an electrochromic device (column 3, lines 1-7), but does not mention a specific structure. Leenders discloses that antireflection coatings comprising a stack of alternatively high and low refractive indices (column 7, lines 38-60) are suitable for use in electrochromic devices (column 10, lines 60-64). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the antireflection coatings of Leenders, in the electrochromic device of Hashimoto, because the antireflection coatings are suitable for electrochromic devices.

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Allemand discloses that the glass substrate of an electrochromic device may be coated with a color layer (column 2, lines 66-67 and column 7, lines 48-55). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color layer, as disclosed by Allemand, with the antireflection film of Hashimoto, because a color layer allows for a display device to be desirably tinted, such as a neutral color.

Regarding claims 17, 30, Leenders discloses that that a suitable antireflection coating is one comprising ITO (column 7, lines 46-67 and column 8, lines 1-10).

Regarding claims 21-22, absent a showing of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the color control layer from any suitable material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. ***In re Leshin*, 125 USPQ 416.**

Regarding claims 23-24, Hashimoto discloses a first conductive layer that may comprise hydrated tantalum oxide or silicon oxide and a second conductive layer that may comprise tantalum oxide or silicon oxide (column 4, lines 1-8). Hashimoto discloses that the substrate may be glass or plastic (paragraph bridging columns 2 and 3).

Regarding claims 31-34, Hashimoto discloses that the electrically controllable system is a superposition of functional layers placed between two carrier substances of glass or plastic (column 2, lines 51-67 and column 6, lines 18-36) and discloses a protective resin film on the electrically controllable system (column 6, lines 19-30).

Regarding claim 38, Hashimoto discloses the use of an electrochromic system (column 1, lines 7-9), but does not mention the use of an electrically controllable system in the form of a liquid-crystal system. It would have been obvious to substitute a liquid-crystal system for the electrochromic system of Hashimoto, because both systems are functionally equivalent as electrically controllable systems having variable optical properties.

9. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Allemand as applied to claims 16-17, 19, 21-24, 30-34 and 36-38 above, and further in view of Chartier.

Hashimoto does not mention the use of a coating with hydrophobic properties. Chartier discloses the use of a hydrophobic-oleophobic coating, on a glass substrate, to give the glass substrate a non-wetting property (column 1, lines 48-62). The hydrophobic-oleophobic coating comprises at least one hydrolysable fluorinated alkylsilane (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coating disclosed by Chartier, on the glazing of Hashimoto, because the coating gives the glazing a non-wetting surface property desirable in some electrochromic devices.

10. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Allemand as applied to claims 16-17, 19, 21-24, 30-34 and 36-38 above, and further in view of Chopin.

Hashimoto does not mention the use of a coating with photocatalytic properties, but Chopin discloses a substrate coating with photocatalytic properties comprising titanium dioxide at least partially crystallized in the anatase form (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the photocatalytic coating of Chopin, to at least one of the external faces of Hashimoto glazing, because the coating would give the glazing anti-fouling properties desirable in some electrochromic devices.

11. Claims 16-17, 21-24, 30-34 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of 5,805,330 to Byker et al. (hereinafter referred to as Byker).

Regarding claims 16-17, 21-24, 30-34 and 36-38, Hashimoto discloses an all-solid

electrochromic device colored or colorless, corresponding to an applied electrical field (column 1, lines 5-18). Hashimoto discloses that an anti-reflection coating is provided on the surface of the electrochromic device (column 3, lines 1-7). Hashimoto discloses the use of an anti-reflection film composed of a plurality of different kinds of layers on the surface of an electrochromic device (column 3, lines 1-7), but does not mention a specific structure. Leenders discloses that antireflection coatings comprising a stack of alternatively high and low refractive indices (column 7, lines 38-60) are suitable for use in electrochromic devices (column 10, lines 60-64). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the antireflection coatings of Leenders, in the electrochromic device of Hashimoto, because the antireflection coatings are suitable for electrochromic devices.

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Byker discloses that the glass substrate of an electrochromic device (column 1, lines 15-21) may be coated with an antireflection layer and/or a color suppression layer to filter out any unwanted portion of the electromagnetic spectrum (column 5, lines 61-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color suppression layer, as disclosed by Byker, along side the antireflection film of Hashimoto, because a color suppression layer allows for the suppression of any unwanted portion of the electromagnetic spectrum which is desirable in some electrochromic devices that require a desired hue or color, such as a neutral color.

Regarding claims 17 and 30, Leenders discloses that that a suitable antireflection coating is one comprising ITO (column 7, lines 46-67 and column 8, lines 1-10).

Regarding claims 21-22, absent a showing of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the color control layer from any suitable material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. ***In re Leshin*, 125 USPQ 416.**

Regarding claims 23-24, Hashimoto discloses a first conductive layer that may comprise hydrated tantalum oxide or silicon oxide and a second conductive layer that may comprise tantalum oxide or silicon oxide (column 4, lines 1-8). Hashimoto discloses that the substrate may be glass or plastic (paragraph bridging columns 2 and 3).

Regarding claims 31-34, Hashimoto discloses that the electrically controllable system is a superposition of functional layers placed between two carrier substances of glass or plastic (column 2, lines 51-67 and column 6, lines 18-36) and discloses a protective resin film on the electrically controllable system (column 6, lines 19-30).

Regarding claim 38, Hashimoto discloses the use of an electrochromic system (column 1, lines 7-9), but does not mention the use of an electrically controllable system in the form of a liquid-crystal system. It would have been obvious to substitute a liquid-crystal system for the electrochromic system of Hashimoto, because both systems are functionally equivalent as electrically controllable systems having variable optical properties.

12. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Byker as applied to claims 16-17, 21-24, 30-34 and 36-38 above, and further in view of Chartier.

Hashimoto does not mention the use of a coating with hydrophobic properties. Chartier discloses the use of a hydrophobic-oleophobic coating, on a glass substrate, to give the glass substrate a non-wetting property (column 1, lines 48-62). The hydrophobic-oleophobic coating comprises at least one hydrolysable fluorinated alkylsilane (paragraph bridging columns 2 and 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the coating disclosed by Chartier, on the glazing of Hashimoto, because the coating gives the glazing a non-wetting surface property desirable in some electrochromic devices.

13. Claims 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto in view of Leenders and in view of Byker as applied to claims 16-17, 21-24, 30-34 and 36-38 above, and further in view of Chopin.

Hashimoto does not mention the use of a coating with photocatalytic properties, but Chopin discloses a substrate coating with photocatalytic properties comprising titanium dioxide at least partially crystallized in the anatase form (abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the photocatalytic coating of Chopin, to at least one of the external faces of Hashimoto glazing, because the coating would give the glazing anti-fouling properties desirable in some electrochromic devices.

(11) Response to Argument

The appellant asserts "When both the antireflection and attenuating/modifying coatings are present, superior results are obtained, which are unobtainable without both layers, or without the antireflection coating. This superiority is demonstrated in the comparative data of record,

and particularly, in Examples 3 and 4, described in the specification beginning at page 18, line 37."

The appellant appears to be arguing unexpected effects from the combined use of an antireflection coating and a coating for attenuating/modifying the color of the glazing, citing a comparison of Example 3 (with an antireflection coating) and Example 4 (without an antireflection coating). The appellant specifically mentions that Example 3 has higher TL (light transmission) values and a higher SF (solar factor, which is the ratio between the total energy entering the room through the glazing to the incident solar energy). With all due respect, the examiner finds the results to be as expected.

Example 3 has an antireflection coating, while Example 4 does not. The antireflection coating reduces reflection, which in turn allows more of the incident light to pass through the glazing (higher TL value), which in turn allows more light to enter the room through the glazing (higher SF). It is expected that the glazing with an antireflection coating (Example 3) would have higher TL values and a higher SF, because the antireflection coating reduces the amount of light that is reflected and increases the amount of light that is transmitted.

In the event that Example 3 (with an antireflection coating) was deemed to demonstrate unexpected results over Example 4 (without an antireflection coating), the unexpected results would not overcome the current rejection. Hashimoto fully discloses an electrochromic device with an antireflection coating. The secondary references, among other thing, are relied upon to teach the addition of a coating for attenuating/modifying the color of the glazing. Absent a showing of unexpected results from the addition of a coating attenuating/modifying the color of the glazing, which the appellant has not shown, the claims are obvious in view of the prior art.

The appellant asserts "The fundamental flaw in all of the above rejections in that none of Demiryont et al, Choi et al, Allemand et al, and Byker et al disclose a coating for attenuating/modifying the color of the glazing in reflection, as that term would be understood from the disclosure, and as recited in independent Claim 16. This layer acts to lower C* saturation values in the (L, a*, b*) colorimetry system of the glazing in reflection, and thus has a function different from the color control layer of Demiryont et al, different from the colored layer of Choi et al, and different from the colored layer of Allemand et al." The examiner respectfully disagrees.

On page 9, lines 4-24 of appellant's current specification, the appellant discloses that a layer that acts to lower C* saturation values in the (L, a*, b*) colorimetry system of a glazing in reflection is simply modifying the color of the glazing in reflection to be as neutral as possible. Demiryont, Choi, Allemand, and Byker each disclose a coating for attenuating/modifying the color of the glazing in reflection, as that term would be understood from the disclosure, and as recited in independent Claim 16, which is a coating for modifying the color of the glazing in reflection to be as neutral as possible.

As written in the Final Office Action mailed 12/18/2002 on page 4, lines 14-21:

> Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Demiryont discloses the use of a color control layer between the glass substrate and the antireflection coating of an electrochromic device (column 6, lines 15-22) to achieve both enhanced uniformity and the desired hue or color (column 7, lines 36-52 and column 8, line 15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color control layer in the electrochromic device of Hashimoto to give the device a desired color, such as neutral, because a color control layer allows for enhanced uniformity and the desired hue or color. (underline added)

As written in the Final Office Action mailed 12/18/2002 in the paragraph bridging pages 7 and 8:

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Choi discloses an antireflection film comprising a colored layer serving to provide the desired tint (column 8, lines 16-23) suitable for image display devices (column 7, lines 54-59). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color layer, as disclosed by Choi, with the antireflection film of Hashimoto, because a color layer allows for a display device to be desirably tinted, such as a neutral color. (underline added)

As written in the Final Office Action mailed 12/18/2002 on page 10, lines 15-20:

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Allemand discloses that the glass substrate of an electrochromic device may be coated with a color layer (column 2, lines 66-67 and column 7, lines 48-55). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color layer, as disclosed by Allemand, with the antireflection film of Hashimoto, because a color layer allows for a display device to be desirably tinted, such as a neutral color. (underline added)

As written in the Final Office Action mailed 12/18/2002 in the paragraph bridging pages 13 and 14:

Hashimoto fails to mention at least one coating for attenuating/modifying the color of the glazing in reflection, but Byker discloses that the glass substrate of an electrochromic device (column 1, lines 15-21) may be coated with an antireflection layer and/or a color suppression layer to filter out any unwanted portion of the electromagnetic spectrum (column 5, lines 61-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a color suppression layer, as disclosed by Byker, along side the antireflection film of Hashimoto, because a color suppression layer allows for the suppression of any unwanted portion of the electromagnetic spectrum which is desirable in some electrochromic devices that require a desired hue or color, such as a neutral color. (underline added)

Demiryont even discloses that the color of the glazing in reflection is preferably neutral (column 8, lines 2-7). Clearly, Demiryont, Choi, Allemand, and Byker each disclose a coating for attenuating/modifying the color of the glazing in reflection, as that term would be understood from the disclosure, and as recited in independent Claim 16, which is a coating for modifying the color of the glazing in reflection to be as neutral as possible.

The appellant asserts "Furthermore, while it is not clear from Byker et al precisely how their color suppression layer functions, nevertheless, Byker et al require that their antireflection layer, if present, be at a location **within** their electro-optic window, rather than on an external face thereof, as required by the present claims. Thus, if one skilled were to combine Byker et al with Hashimoto et al and Leenders et al, even if there was some overlap between present component (c) and Byker et al's color suppression layer, the result would not be the presently-claimed invention." The examiner respectfully disagrees.

Although Byker may teach that their antireflection layer, if present, be at a location within their electro-optic window, the primary reference (Hashimoto) discloses that the anti-reflection coating is to be provided on the surface of the electrochromic device (column 3, lines 1-7). Byker is utilized by the examiner to teach that the glass substrate of an electrochromic device may be coated with an antireflection layer and/or a color suppression layer. The examiner does not utilize Byker to teach a different location for the antireflection layer and no motivation exists to make such a move.

The appellant asserts that claim 19 is separately patentable because Choi and Allemand each fail to teach the coating for attenuating/modifying the color of the glazing in reflection wherein the coating includes a thin layer having a refractive index of between 1.6 and 1.9. The examiner respectfully disagrees.

Choi discloses that the coating for attenuating/modifying the color of the glazing in reflection may be a tinted hard coat (column 8, lines 16-23). Choi discloses that the substrate of the article has a refractive index of at least 1.60 (column 5, lines 12-14) and that hard coat should have a higher refractive index than the substrate (column 5, lines 38-41). Therefore, Choi discloses a coating for attenuating/modifying the color of the glazing in reflection wherein the coating has a refractive index between 1.6 and 1.9.

Allemand discloses that the coating for attenuating/modifying the color of the glazing in reflection may be a specific colored substrate (column 7, lines 55-59). Allemand discloses that the substrate may be polyester (column 7, lines 31-36). Considering that polyester inherently has a refractive index of about 1.65 (see column 5, lines 15-23 of Choi), Allemand clearly discloses a coating for attenuating/modifying the color of the glazing in reflection wherein the coating has a refractive index between 1.6 and 1.9.

The appellant asserts that claims 23 and 24 are each separately patentable because the first conductive layer and the second conductive layer of Hashimoto et al are not analogous to the carrier substrate and primer/tie-layer coating of these claims, however, the appellant has failed to set-forth any reasoning as to why the first conductive layer and the second conductive layer of Hashimoto et al are not analogous to the carrier substrate and primer/tie-layer coating of the claims. Absent such an argument it is the position of the examiner that claims 23 and 24 are properly rejected.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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PATENT EXAMINER

atp
September 12, 2003

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